UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5
77 WEST JACKSON BOULEVARD
CHICAGO, IL 60604-2590

REPLY TO ATTENTION OF: SR-6J

MEMORUNDUM

DATE: April 29, 2016

SUBJECT: Inter-Agency Agreement (IA), Supplemental Engineered Controls Study, Tremont City Barrel Fill Site, Ohio.

FROM: Glynis G. Landers
EPA Region V IA Project Officer

THRU: Marvene Seaman, "EM CS"
Missouri River Division

Enclosed is the 1st amendment for additional funding and an extension to the period of performance initiated under the multi-site generic Interagency Agreement (IA) for the Tremont City Barrel Fill site. This work assignment requests additional assistance in a supplemental engineered controls study of the remedy of an engineered waste cell at the currently unlined, permitted, industrial waste that was selected for the Tremont City Barrel Fill Site, Tremont City, Ohio. This task is for the review of background information, a review of the selected remedy, revision of the draft Evaluation of Supplemental Engineering Controls report submitted to EPA on March 18, 2016, and recommendations of any other potential additional engineered controls by a professional engineer/hydro-geologist and/or other appropriate disciplines that may enhance the existing remedy. This may include applying any technology or engineering controls to all or a portion of the waste materials. The work products (final supplemental engineering controls study) will be delivered in electronic form.

If you have any questions, please don't hesitate to contact me at (312) 886-1816.

CC: Jeff Marsala (MS002) Accounting Operation Office
Jim Saric, SR-6J
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EPA REGION V
WORK AUTHORIZATION FORM (WAF)
U.S. ARMY CORPS OF ENGINEERS GENERIC INTERAGENCY AGREEMENT

April 29, 2016

1. **NAME:** Tremont City Barrel Fill Site
2. **WAF ASSIGNMENT TITLE:** Supplemental Engineering Controls Study
3. **WAF ASSIGNMENT NUMBER: WAF (R5) 014**
4. **REVISION NO. 001**
5. **IAG NO.: DW96957842**
6. **EPA SITE I.D. NUMBER:** OHD980612188
7. **SITE/SPILL ID NO:** B5B1
8. **EPA RPM NAME:** Jim Saric PHONE: (312) 886-0992
9. **PERIOD OF PERFORMANCE- FROM:** May 9, 2016 **TO:** September 30, 2016
10. **FUNDING**

WAF Assignment Funding	
Previous Funding	**$10,000**
Current Funding	**$10,000**
Total Funding	**$20,000**

11. **SCOPE OF WORK:**

Scope of Work:

The purpose of this work assignment is to request a supplemental engineering controls study for the selected remedy at the Tremont City Barrel Fill Site, Tremont City, Ohio. This work assignment requests the assistance in proposing and evaluation of additional, cost effective engineering controls that may be included in addition to the selected remedy at the Tremont City Barrel Fill Site, Tremont City, Ohio. The selected remedy includes a waste cell that will contain reconsolidated non-liquid hazardous waste with various detection/monitoring systems. This task is for the review of background information, a review of the selected remedy, revision of the draft Evaluation of Supplemental Engineering Controls ACOE report submitted to EPA on March 18, 2016, and recommendations of any other potential additional engineered controls by a professional engineer/hydro-geologist and/or other appropriate disciplines that may enhance the existing remedy. This may include applying any technology or engineering controls to all or a portion of the waste materials. The work products (final supplemental engineering controls study) will be delivered in electronic form.

Site Description/Background Information:

In 1976 Ohio EPA issued a permit for a chemical landfill that would dispose of various hazardous waste from the Barrel Fill site. From 1976 to 1979, about 51,500 drums and around 300,000 gallons of industrial waste were disposed of in 50 waste cells about 15 to 20 feet deep. This waste included glues, resins, paint sludge, paint scrap and waste, soap, shampoo, detergent, asbestos, oils and other industrial compounds.

Disposal of liquid, biodegradable waste (margarine, corn syrup) from food industry sources occurred next to the Barrel Fill site between 1979 and 1980. All disposal operations at the site stopped in 1980 and a soil cover of three to four feet was placed over the area. Soil was added in subsequent years and now the cover over the waste cells ranges from 10- to 17-feet deep.

EPA began investigating conditions at the Barrel Fill location in 1997 in response to community concerns about pollution releases. The Agency found some leaks from the waste cells and concluded more study was needed. In 2002 EPA negotiated a legal agreement with the responsible parties. The legal agreement required the PRPs to investigate the contamination and to reimburse EPA for any oversight costs the Agency incurred.

The investigation by the PRPs found most of the waste cells were intact but did show high levels of contaminants at the Barrel Fill site. The underground waste and drums contain a variety of "contaminants of concern" at concentrations that exceed established safety levels. Contaminants of concern are substances that pose a significant current or future health risk at the site.

Levels of volatile organic chemicals (VOCs), semi-volatile organic chemicals (SVOCs) and metals were detected in the liquid and solid waste held in the waste cell water samples and surrounding waste. Low levels of some contaminants were found in shallow ground water. Ground water is an environmental term for underground supplies of water. SVOCs were also found in the surface water while VOCs and metals have contaminated the soil. Results of sediment (mud) sampling conducted next to the Barrel Fill site near Chapman Creek also showed elevated contaminant levels. Some elevated levels of contaminants may be due to the Landfill residing on the same property as the Barrel Fill.

The investigation at the property included a human health risk assessment that studied risks to maintenance workers and trespassers, the most likely people to be exposed to contaminants on the site. The assessment concluded contaminant levels in the air, soil and surface water do not currently pose a significant risk. However, the study did find elevated risk to human health from future groundwater contaminants leaking into surface water. The assessment did not evaluate the risk of contamination to the underground layer of rock and other material containing drinking water (called an aquifer). But EPA has concluded contaminants will move toward the drinking water aquifer in the future if no cleanup action is taken. Therefore, EPA has considered the drinking water aquifer a factor in its evaluation of cleanup alternatives.

Description of Selected Remedy:

The remedy selected in the September 2011 Record of Decision (ROD) included excavating all waste and transporting liquid waste off-site for treatment and disposal; building a lined engineered waste cell containing a bottom clay liner and a flexible membrane liner with a liquid collection system; consolidating hazardous and nonhazardous solid waste and contaminated soil in the waste cell; placing a hazardous waste cap over the cell and install a slurry wall around the cell along with a liquid collection; and an additional liquid collection system would be installed as a back-up. Any liquid collected would be pumped to an on-site storage tank for eventual treatment and disposal. Since the remedy was selected, EPA, the PRPs, and some state and local officials have stated that a standard hazardous waste double liner would be preferred to the slurry wall. Therefore, the evaluation should assume that rather than a slurry wall around the waste cell, the cell bottom will be constructed with a standard hazardous waste double liner with a double leachate collection system.

The major components of the selected remedy include the following:

- Removing the existing clean soil cover and holding it on-site. This will be reused for the compacted soil cover above the hazardous waste liner.
- Excavating the drums, uncontained waste and contaminated soil from each of the 50 waste cells. Any waste, including sludge, that is determined to be liquid per the RCRA paint filter test will be sent for off-site treatment and disposal.
- Removing non-liquid hazardous waste from the drums and preparing the drums for reburial.
- Pumping and removing all liquid waste, both in and outside of containers. The liquid waste will be taken off-site to be treated and disposed.
- Consolidating uncontained waste and solid hazardous and nonhazardous waste from drums and contaminated soil in a newly constructed engineered lined cell with leachate (seepage) collection. The drums and their remaining contents will be crushed to reduce volume and to help remove any liquids from the drums.
- Installing a hazardous waste double FML lower liner with leachate collection for both liners.
- Installing a hazardous waste landfill cover over the waste left on-site.
- Long-term underground water (groundwater) monitoring.
- Preventing or limiting certain future land uses and the use of site groundwater.
- Placing fencing and signs around the site.
- Contingency planning in case officials must take action if unexpected conditions occur.

The Final Supplemental Engineering Controls Study must evaluate the feasibility and appropriateness of any additional engineering controls on all or a portion of the waste materials, any addition increase/decrease in protectiveness of those controls, and their cost effectiveness. A technical memorandum must be submitted to document the findings of this evaluation.

The study will include, but not be limited to, the following additional engineering controls:

1. Removal and off-site disposal of wastes that exhibit the characteristics of ignitability, corrosivity, or reactivity;
2. The addition of a physically stabilizing agent to all or a portion of wastes reconsolidated in the newly engineered waste cell to reduce mobility and liquid generation;
3. The additional of a physically and chemically stabilizing agent to all or a portion of wastes reconsolidated in the newly engineered waste cell to reduce mobility and liquid generation;
4. The addition of a bioremediation agent to all or a portion of wastes reconsolidated in the newly engineered waste cell to reduce mobility and liquid generation, and ;
5. Incineration of all or a portion of wastes on-site and reconsolidation of treated waste in the newly engineered waste cell.

12. **SCHEDULE FOR ASSIGMENT ACTIVITIES AND DELIVERIES:**

Deliverables: Interim Final Report to be delivered to EPA.
Due Date: Interim Final report due to EPA 30 days after the start date of this WAF.
Final Report due to EPA 30 days after EPA comments on Interim Final Report.

13. **ACCOUNTING INFORMATION:**

Accounting Information								
	DCN	**FY**	**APPR. CODE**	**BUDGET ORG.**	**PROGRAM ELEMENT**	**SITE PROJECT**	**OBJECT CLASS**	**AMOUNT**
Deobligate From	**SEX004**	**15**	**T**	**5AFOP**	**302DD2**	**05WQTA00**	**2506**	**$10,000**
Obligate To:	**SEX004**	**15**	**T**	**5AFOP**	**302DD2**	**B5B1TA00**	**2506**	**$10,000**

If additional funds or extensions to the period of performance are needed, the USACE shall contact the USACE Generic IA Project Officer, Ms. Glynis G. Landers at (312) 886-1816, as soon as practicable.

PRIMARY CONTACTS

The primary EPA contact for this work assignment is Jim Saric. He can be reached at (312) 886-0992 or by email at saric.james@epa.gov.

AUTHORIZATION:

Authorized is hereby given to USACE to provide technical assistance work as provided for in the generic IA and within the scope of work, budget, and schedule as described in this WAF. Sufficient funds are available in the generic IA to support this WAF.

Glynis G. Landers
Glynis G. Landers (SR-6J)
Regional Project Officer

CC: Jeff Marsala (MS002) Accounting Operation Office
Jim Saric, SR-6J
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